February 14, 2005 Case No. DP-308943 (7500/227) Serial No.: 10/603,551

Filed: June 25, 2003 Page 12 of 25

SPECIFICATION AMENDMENTS:

Please replace the paragraph beginning on page 18, line 1 with the following replacement paragraph, in which no new matter has been added.

The apply valve 18 has an inlet connected to the master cylinder 12 and an outlet connected to the rear brakes. The release valve 20 has an inlet connected to the rear brakes and an outlet connected to the accumulator 22. The differential pressure [[24]] switch 24 is operatively connected to sense the difference between the pressure in the rear brake circuit 16 at the inlet of the apply valve 18, as supplied by the master cylinder 12, and the pressure in the rear brakes, and to generate an electrical signal when a predetermined pressure differential is detected.

Please replace the paragraph beginning on page 11, line 5 with the following replacement paragraph, in which no new matter has been added.

One approach for providing true DRP in an RWAL type system is disclosed by commonly assigned US Patent Application No. [[________]] 10/624,056 filed concurrently herewith, bearing the Assignee's docket number DP-308395, to Bond, et al, which is incorporated herein by reference. Bond provides true DRP in an RWAL system through the use of a front wheel speed sensor. While the approach of Bond et al does provide true DRP and improved performance of an RWAL system, the addition of the front wheel speed sensor is undesirable in some applications. An alternative approach that provides an improved DRP function in an RWAL brake system without the need for a front wheel speed sensor would be desirable.

February 14, 2005 Case No. DP-308943 (7500/227) Serial No.: 10/603,551

Filed: June 25, 2003 Page 13 of 25

Please replace the paragraph beginning on page 15, line 11 with the following replacement paragraph, in which no new matter has been added.

The RPC apparatus 66 is operatively connected to also includes a speed sensor 80 operatively connected for sensing a speed of at least one of the rear wheels and sending a rear wheel speed signal to the ECU 70. In the exemplary embodiment shown in FIG. 5, the speed sensor 80 is connected to a rear wheel drive train component, in the form of a rotating component of the transmission or rear wheel differential 82. Our invention may be practiced with one rear wheel speed sensor 80, as shown in FIG. 5, or with individual sensors on each of the rear wheels. Where the second speed sensor 80 is provided in the form of a single rear wheel speed sensor 80 attached to a rear wheel drive train component 82, as shown in FIG. 5, the rear wheel speed sensed may be an average speed value for the rear wheels.

Please replace the paragraph beginning on page 18, line 1 with the following replacement paragraph, in which no new matter has been added.

As shown at block 118, in FIG. 7, in addition to calculating the eight values described above, the ECU 70 also makes a determination with regard to the type of surface on which the vehicle is operating, from rear wheel speed signal. Where a rough road surface is detected, the ECU 70 modifies the RPC entry point, generally in a manner delaying entry into RPC. In one embodiment of the invention, the ECU 70 monitors noise on the wheel speed signals generated by the wheel speed sensor 80. When the vehicle is operating on a smooth road surface, the signals received from the wheel speed sensors [[78, 84,]] 80 exhibit only a small noise component. As the road surface becomes progressively rougher, the noise component increases. The ECU 70 makes use of this noise component to estimate the type of surface that the vehicle is operating on, and if necessary, modifies the RPC entry point to compensate for the road surface in the command generated at block 116 for controlling the HCU 68.

February 14, 2005 Case No. DP-308943 (7500/227)

> Serial No.: 10/603,551 Filed: June 25, 2003 Page 14 of 25

Please replace the paragraph beginning on page 18, line 14 with the following replacement paragraph, in which no new matter has been added.

Although the RDP term and RDP entry point can be ealculate calculated in any suitable manner, the exemplary method 112 includes calculating the RDP term by first calculating the vehicle speed estimate (VS Est), as shown at block 120, and then calculating the vehicle acceleration estimate (VA Est), and the rear wheel acceleration (RWA Est), as functions of the vehicle speed (VS Est), as shown at blocks 122 and 124 of FIG. 7. The RDP term is then calculated, as shown at block 126, as a proportional difference between the RWA Est and VA Est.

Please replace the paragraph beginning on page 19, line 16 with the following replacement paragraph, in which no new matter has been added.

As will be readily seen from the graph of FIG. 8, for a given speed and desired deceleration, as shown by the dashed line at [[A]] AA, the vehicle requires more rear brake pressure to stop when operating loaded at GVW than it does when operating at LVW. The rear pressure sensor 84 of the exemplary embodiment 50 of a brake apparatus according to our invention can readily detect whether the rear brake pressure is in the range indicated by the pressure range labeled as B, indicating operation at LVW, or whether the vehicle is operating in a higher pressure range labeled as C, indicating that the vehicle is operating at GVW.

February 14, 2005 Case No. DP-308943 (7500/227)

Serial No.: 10/603,551 Filed: June 25, 2003 Page 15 of 25

Please replace the paragraph beginning on page 21, line 11 with the following replacement paragraph, in which no new matter has been added.

During a braking event consisting of a single stroke of the master cylinder, the ECU 70 continually iterates at a rapid rate through the steps of the method 112, as shown in FIG. 6, using the eight values discussed above, which are also continually updated, as shown in FIG. 7. As shown at diamond 150, if RPC is already active, the ECU 70 will use the eight values to calculate whether the brake apparatus 50 should continue in RPC mode ("CALC RPC MODE"), and if so what commands should be given to the HCU 68 ("CALC MOD CMD") for controlling the apply and release valves 86, 92, as shown at block 151.

Please replace the paragraph beginning on page 26, line 19 with the following replacement paragraph, in which no new matter has been added.

As shown in FIG. 6, in some embodiments of our invention the ECU 70 also receives additional inputs 166 from dedicated sensors or a vehicle bus for further enhancing control of the rear brakes during RPC an/or RDP operation. Such inputs may include ambient or fluid temperature, throttle position, brake pedal travel, time that the apply and release valves operated in open and closed states during the braking event, elapsed time since the last braking event, etc.